March 31, 1950

Mr. Arnold Brilhart
Arnold Brilhart Limited
Old Country Road
Mineola, Long Island
New York

Dear Mr. Brilhart,

In accordance with your letter of March 27, we have measured the transmission on the Kel-F parts submitted by the M. W. Kellogg Company.

These samples were numbered 6, 7, and 11. We list in the table below the transmission values for the window alone and for the window plus 1, 2 and 3 inserts.

Sample No.	6	7	11
	---- per cent transmission ----		
Window Alone	80.2	85.4	85.6
1 insert	75.9	79.0	79.4
2 inserts	72.4	72.2	74.2
3 inserts	68.4	68.0	69.6

We note that the window is approximately .073" thick, while the thickest of the inserts is 1/16". By visual inspection it is apparent that the transparency of the 1/16" insert is far superior to that of the window. It would appear desirable if possible to decrease the window thickness to 1/16" in order to achieve the clarity represented by the 1/16" inserts.

We should appreciate several additional samples

as soon as possible in order to proceed with the necessary redesign and procurement of the metal parts for the project.

Please accept our thanks for your cooperation.

Very truly yours

UNITED STATES RADIUM CORP.

C. C. Carroll
Chief Chemist

CCC:ml
cc : C. W. Wallhausen

TELEPHONE:
GARDEN CITY 7-0425

OLD COUNTRY ROAD
MINEOLA, L.I., NEW YORK

ARNOLD Brilhart LIMITED

DESIGNING • MOLD MAKING • MOLDING • FABRICATION AND FINISHING Plastics

March 27, 1950

Mr. C. C. Carroll
U. S. Radium Corporation
P.O. Box #380
Bloomsburg, Pennsylvania

Dear Mr. Carroll:

With reference to the compression molded Kel-F parts referred to in my recent letter, we wish to tell you that these parts are being forwarded to you tomorrow, directly from the M. W. Kellogg Co.

We had them run a material test on these parts and find that there is no de-composition such as occurred in the previously sent injection molded samples.

The methods used in producing these parts lends itself to the production of much larger clear sections, as long as we do not go over 1/16" thickness in the section that has to be clear. As in this case we can use any number of clear 1/16" inserts in order to build up the desired thickness of the housing.

Kindly advise us immediately with regard to the light transmission values of these items so that we may proceed.

Yours Sincerely,

ARNOLD BRILHART LTD.

Arnold Brilhart

Arnold Brilhart

AB:jvw

TELEPHONE:
GARDEN CITY 7-0425

OLD COUNTRY ROAD
MINEOLA, L.I., NEW YORK

ARNOLD Brilhart LIMITED

DESIGNING • MOLD MAKING • MOLDING • FABRICATION AND FINISHING *Plastics*

March 16, 1950

Mr. C. C. Carroll
United States Radium Corporation
P. O. Box 380
Bloomsburg, Penna.

Dear Mr. Carroll:

Mr. Wallhausen suggested that we work directly with you regarding the Kel-F parts we are manufacturing for your company.

As I explained to him on the phone today the parts that I left with him yesterday are not indicative of the final result we expect to achieve. In fact, the material in these parts is broken down so that its composition is not up to Kellogg's specifications for molded Kel-F.

These parts were made by injection molding and we feel that we will obtain better parts by compression molding and we expect to have a small single cavity mold finished the first part of this week and will send you some good samples by that time.

Inasmuch as the shrinkage on the new parts we intend to make may be slightly different from the sample that was sent to you we suggest that you wait for a few days before ordering the metal parts so that they may be made to the specifications of the compression molded pieces.

Kindly contact me directly if there is anything in connection with this program that we can expedite for you.

With my very best personal regards and hoping that you will have the chance to visit us sometime in the near future, I remain

Yours sincerely,

ARNOLD BRILHART, LIMITED

Arnold Brilhart

Arnold Brilhart

AB/cbv

RADIATION AND BRIGHTNESS MEASUREMENTS

Sample number 8-I

Use one sheet for each sample. Be sure that the sample number on this sheet corresponds to that appearing on the sample.

Order number IS-3

Sample submitted by [illegible] (initials) on 3/30/50 (date)

Compounded or prepared _____ (date)

Description of sample Self-windows & inserts

Type of measurement desired: (Check) Transmission

Alpha ( ); Beta ( ); Gamma ( ); Neutron ( )

Equilibrium value ( ); Absorption curve ( )

Brightness ( ); Decay ( )

Measurements

Sample No. →	6	7	11
		% transmission	
window	77.2	82.4	82.6
window plus one insert	72.9	76.0	76.4
" plus two inserts	69.4	69.2	71.2
" plus three insert	65.4	65.0	66.6

a Sr 90, #48, 250 µc/g glass slide was used as the light source

Transmission of Plastic Disc

3-16-49

V. 12, p. 51.

Green Std. source — 86.7 %

Green slide source (FL 477) — 86.8 %

12 R Std source — 84.7 %

0.050" Rel-R.